

What is claimed is:

1. A method for rollover stabilization of a vehicle in critical driving situations, in which a rollover stabilization algorithm (4,5,8) intervenes in the driving operation in a critical situation, using an actuator (3,9,10), in order to stabilize the vehicle, wherein the vehicle mass (m) is ascertained and the rollover stabilization algorithm (4,5,8) is executed as a function of the vehicle mass (m).
2. The method as recited in Claim 1, wherein the vehicle mass (m) is estimated using an algorithm (8).
3. The method as recited in Claim 1 or 2, wherein information on the vehicle's center of gravity ( $h_{sp}$ ) is estimated and the rollover stabilization algorithm (4,5,8) is executed as a function of the vehicle mass (m) and the information on the vehicle's center of gravity ( $h_{sp}$ ).
4. The method as recited in Claim 3, wherein the information on the vehicle's center of gravity ( $h_{sp}$ ) is derived from the estimated characteristic speed ( $v_{ch}$ ).
5. The method as recited in Claim 3 or 4, wherein the information on the vehicle's center of gravity ( $h_{sp}$ ) is ascertained from the ratio of the contact patch forces of the wheels ( $F_{N1}/F_{Nr}$ ) of opposite wheels during cornering.

6. The method as recited in Claims 3 and 4, wherein the information on the vehicle's center of gravity ( $h_{sp}$ ) is ascertained from the estimated characteristic speed ( $v_{ch}$ ) and from the ratio of the contact patch forces of the wheels ( $F_{Nl}/F_{Nr}$ ) of opposite wheels during cornering.
7. The method as recited in one of Claims 3 through 6, wherein an indicator variable (S), using which a stabilization intervention is released or deactivated, or a characteristic property of the rollover stabilization algorithm (4,5,8) is determined as a function of the vehicle mass (m) or of the vehicle mass (m) and the information on the vehicle's center of gravity ( $h_{sp}$ ).
8. The method as recited in one of Claims 3 through 6, wherein a control threshold value, a system deviation or a controlled variable of the rollover stabilization algorithm (4,5,8) is determined as a function of the vehicle mass (m) or the vehicle mass (m) and the information on the vehicle's center of gravity ( $h_{sp}$ ).
9. A vehicle dynamics control system for the rollover stabilization of a vehicle in critical driving situations, comprising a control unit (1), in which a rollover stabilization algorithm (4,5,8) is stored, a sensor system (2) for recording current actual values of driving state variables ( $a_y, day/dt, P, n$ ) and an actuator (3) for carrying out a stabilization intervention when a rollover-critical situation is detected, wherein using the sensor system (2), information is ascertained on the vehicle mass (m) and the rollover stabilization algorithm (4,5) is set up in such a way

that the controller behavior is a function of the vehicle mass (m).

10. The vehicle dynamics control system as recited in Claim 9,  
wherein the control unit (1) includes an algorithm (8) for estimating the vehicle mass (m).
11. The vehicle dynamics control system as recited in Claim 9,  
wherein the control unit (1) includes an algorithm (8) for estimating information on the vehicle's center of gravity ( $h_{sp}$ ), this information being taken into consideration together with the vehicle mass (m) during a rollover stabilization.
12. The vehicle-dynamics control system as recited in Claim 11,  
wherein the information on the vehicle's center of gravity ( $h_{sp}$ ) is derived from the estimated characteristic speed ( $v_{ch}$ ).
13. The vehicle dynamics control system as recited in Claim 9,  
wherein a sensor system (2,6) is provided by which a ratio of the contact patch forces ( $F_{N1}/F_{Nr}$ ) of opposite wheels is able to be ascertained.